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UN Regulation No. 73 (Lateral protection devices)

Proposal for the 02 series of amendments to UN Regulation No. 73 (Lateral Protection Devices)

Submitted by the expert from France*

The text reproduced below was prepared by the expert from France proposing an amendment to UN Regulation No. 73 to improve the level of performance of Lateral Protection Devices (LPD) for a better protection of vulnerable road users. It is based on informal documents GRSG-113-12 and GRSG-113-13, presented at the 113th session of the Working Party on General Safety Provisions (GRSG) (see report ECE/TRANS/WP.29/GRSG/92, para. 44). The modifications to the current text of UN Regulation No. 73 are marked in bold characters.

* In accordance with the programme of work of the Inland Transport Committee for 2014–2018 (ECE/TRANS/240, para. 105 and ECE/TRANS/2014/26, cluster 02.4), the World Forum will develop, harmonize and update UN regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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I. Proposal

Insert new paragraphs 11.5. to 11.7., to read:

"11.5. **As from the official date of entry into force of the 02 series of amendments, no Contracting Party applying this Regulation shall refuse to grant UN type approval under this Regulation as amended by the 02 series of amendments.**

11.6. **As from [XX] months after the date of entry into force of the 02 series of amendments, Contracting Parties applying this Regulation shall grant approvals only if the type of vehicle or LPD to be approved meets the requirements of this Regulation as amended by the 02 series of amendments.**

11.7. **As from [XX] months after the date of entry into force of the 02 series of amendments, Contracting Parties applying this Regulation shall not be obliged to accept, for the purpose of national or regional type approval, a vehicle or LPD which is not type approved under the 02 series of amendments to this Regulation.**"

PART I: APPROVAL OF VEHICLES WITH REGARD TO THEIR LATERAL PROTECTION DEVICES (LPD)

Paragraph 12.3., amend to read:

"12.3. LPD may consist of a continuous flat surface, or of one or more horizontal rails, or a combination of surface and rails; when rails are used they shall be not more than **400 mm** apart and not less than:

(a) 50 mm high in the case of vehicles of categories N_2 and O_3;

(b) 100 mm high and essentially flat in the case of vehicles of categories N_3 and O_4.

Combinations of surfaces and rails shall form a practically continuous LPD subject, however, to the provisions of paragraph 12.2."

Paragraph 12.8., amend to read:

"12.8. The lower edge of LPD shall **be defined as follows:**

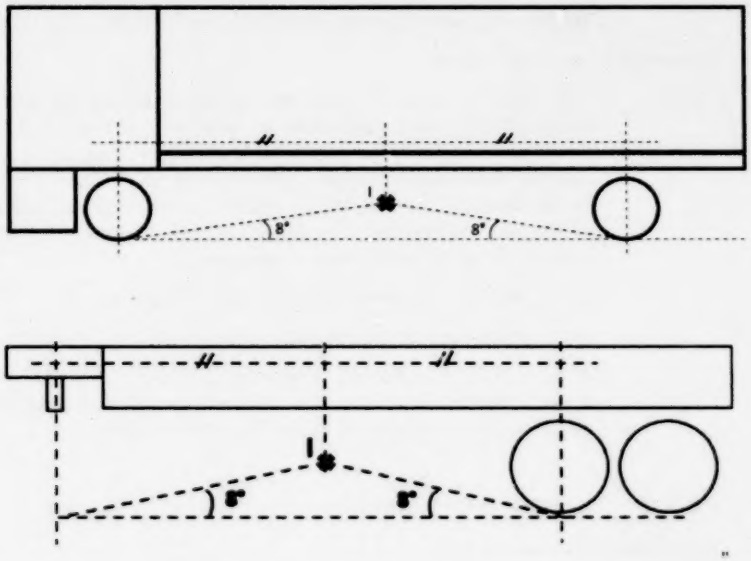
(a) If I ≤ 350 mm then the ground clearance can be 350 mm maximum;

(b) If 350mm < I ≤ 450mm then the ground clearance is I;

(c) If 450mm < I then the ground clearance is 450 mm maximum;

with intersection point I defined as mentioned in Figure 1.

Figure 1



Paragraphs 12.9. to 12.9.2., amend to read:

"12.9. The upper edge of LPD shall not be more than **450 mm** below that part of the structure of the vehicle, cut or contacted by a vertical plane tangential to the outer surface of the tyres, excluding any bulging close to the ground, except in the following cases:

12.9.1. Where the plane in paragraph 12.9. does not cut the structure of the vehicle, then the upper edge shall be level with the surface of the load-carrying platform, or **850 mm** from the ground, whichever is the less;

12.9.2. Where the plane in paragraph 12.9. cuts the structure of the vehicle at a level more than 1.3 m above the ground, then the upper edge of the device shall not be less than **850 mm** above the ground;"

Paragraph 12.10., amend to read:

"12.10. LPD shall be essentially rigid, securely mounted (they shall not be liable to loosening due to vibration in normal use of the vehicle) and, except as regards the parts listed in paragraph 12.11., made of metal or any other suitable material. LPD shall be considered suitable if they are capable of withstanding a horizontal static force of **[3 kN]** applied perpendicularly to any part of their external surface by the centre of a ram the face of which is circular and flat, with a diameter of 220 mm ± 10 mm, and if the deflection of the device under load measured at the centre of the ram is then not more than:

(a) **[90]** mm over the rearmost 250 mm of the device; and

(b) **[450]** mm over the remainder of the device.

At the request of the manufacturer, compliance with this requirement may be demonstrated by calculation. The validity of the calculation method shall be established to the satisfaction of the Technical Service."

Paragraph 14.4., amend to read:

"14.4. LPD shall be essentially rigid and, except as regards the parts listed in paragraph 14.5., made of metal or any other suitable material. LPD shall be considered suitable if they are capable of withstanding a horizontal static force of **[3 kN]** applied perpendicularly to any part of their external surface by the centre of a ram the face of which is circular and flat, with a diameter of 220 mm + 10 mm, and if the deflection of the device under load measured at the centre of the ram is then not more than:

(a) **[90]** mm over the rearmost 250 mm of the device; and

(b) **[450]** mm over the remainder of the device.

At the request of the manufacturer, compliance with this requirement may be demonstrated by calculation. The validity of the calculation method shall be established to the satisfaction of the Technical Service."

PART II: APPROVAL OF LATERAL PROTECTION DEVICES (LPD)

Paragraph 14.2., amend to read:

"14.2. LPD may consist of a continuous flat surface, or of one or more horizontal rails, or a combination of surface and rails; when rails are used they shall be not more than **400 mm** apart and not less than:

(a) 50 mm high in the case of vehicles of categories N_2 and O_3; or

(b) 100 mm high and essentially flat in the case of vehicles of categories N_3 and O_4.

Combinations of surfaces and rails shall form a practically continuous LPD subject, however, to the provisions of paragraph 14.1."

PART III: APPROVAL OF A VEHICLE WITH REGARD TO THE INSTALLATION OF LATERAL PROTECTION DEVICES (LPD) OF A TYPE APPROVED ACCORDING TO PART II OF THIS REGULATION

Paragraph 15.6., amend to read:

"15.6. The lower edge of LPD shall **be defined as follows:**

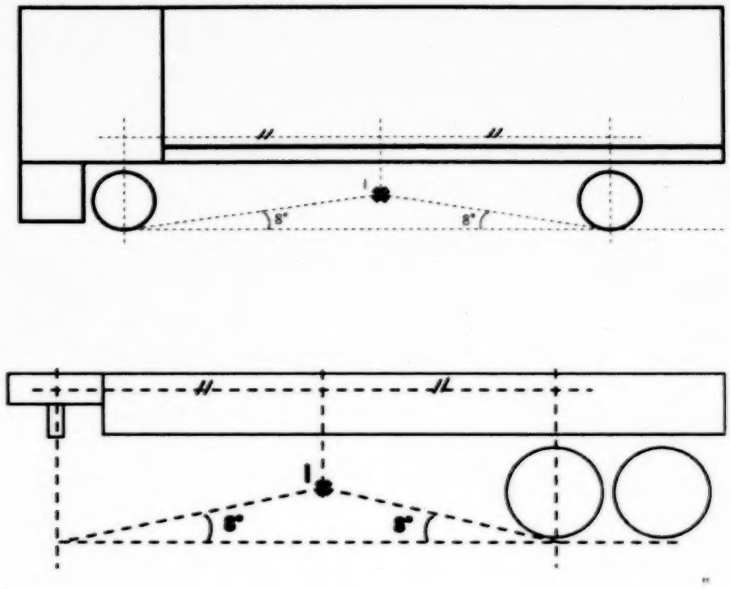
(a) If I ≤ 350 mm then the ground clearance can be 350 mm maximum;

(b) If 350 mm < I ≤ 450 mm then the ground clearance is I;

(c) If 450 mm < I then the ground clearance is 450 mm maximum;

with intersection point I defined as mentioned in Figure 2.

Figure 2



Paragraphs 15.7. to 15.7.2., amend to read:

"15.7. The upper edge of LPD shall not be more than **450 mm** below that part of the structure of the vehicle, cut or contacted by a vertical plane tangential to the outer surface of the tyres, excluding any bulging close to the ground, except in the following cases:

15.7.1. Where the plane in paragraph 15.7. does not cut the structure of the vehicle, then the upper edge shall be level with the surface of the load-carrying platform, or **850 mm** from the ground, whichever is the less;

15.7.2. Where the plane in paragraph 15.7. cuts the structure of the vehicle at a level more than 1.3 m above the ground, then the upper edge of the device shall not be less than **850 mm** above the ground;"

II. Justification

For a detailed justification, please consult informal documents GRSG-113-12 and GRSG-113-13 presented at the 113th session of GRSG.